Appln. No. 10/624,861
Amendment dated April 11, 2006
Reply to Office Action mailed October 11, 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims (deleted text being struck through and added text being underlined):

1. through 8. (Cancelled)

9.   (Currently Amended) A configurable surround sound system comprising:

a control processing unit including a sound signal converter, a plurality of input channels, and a plurality of output channels, said computer processing unit further including computer software which would control the transmitting of sound signals to said mixer board in whatever pattern desired;

a user interface means connected to said control processing unit, said user interface means including a keyboard, a mouse and controller unit for triggering messages to said control processing unit;

a monitor connected to said control processing unit;

a means for creating and transmitting sound signals connected to said control processing unit and including at least one sound producing means having a plurality of output channels, said sound producing means being connected to said control processing unit;

a means for mixing in sound signals with the sound signals received from said control processing unit including a mixer board having a plurality of input and output channels, a plurality of volume control members, and a plurality of sound signal positioners which include dials rotatably mounted upon said mixer board and, each dial controlling a sound signal received in a respective said input channel and also directing a sound signal transmitted to a respective said output channel;

a means for amplifying the sound signals received from said mixing means; and

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a plurality of speakers connected to said amplifying means;

wherein said mixing-means includes:

means for creating a sound source, including generating a digital

signal processing (DSP) layer;

means for creating a DSP algorithm for the DSP layer of the

sound source to create a motion path for the sound source;

means for creating a curve to represent the motion path;

means for providing a work space with a set of tools for creating

a playback setting to control a playback mode of the sound source;

means for adjusting a value of a parameter;

means for defining a playback environment with a plurality of

sound outputs, including providing information on the position and

orientation of each of the sound outputs; and

means for determining a value for each sound output of the

plurality of sound outputs based upon the locations and orientations of

the sound outputs in the playback environment relative to the source

object.

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10. (New) A method of creating a reproducing sound in a three dimensional space, comprising:

creating a sound source, including generating a digital signal processing (DSP) layer;

creating a DSP algorithm for the DSP layer of the sound source to create a motion path for the sound source;

creating a curve to represent the motion path;

providing a work space with a set of tools for creating a playback setting to control a playback mode of the sound source;

adjusting a value of a parameter;

providing a positional controller to adjust a position of a source object along one of the motion paths with respect to a listening object;

defining a playback environment with a plurality of sound outputs, including providing information on the position and orientation of each of the sound outputs; and

determining a value for each sound output of the plurality of sound outputs based upon the locations and orientations of the sound outputs in the playback environment relative to the source object.

11. (New) The method of claim 10 wherein creating a curve includes providing points on the curve of the motion path when a cursor is clicked on the curve.

12. (New) The method of claim 11 additionally comprising adjusting the curve of the motion path by dragging one of the points on the curve.

13. (New) The method of claim 10 additionally comprising activating one of the DSP functions to activate processing of the sound source or deactivating the one DSP function to bypass processing of the sound source.

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14. (New) The method of claim 13 additionally comprising providing an indicator of the DSP function, the indicator comprising an arrow, wherein an indication of the arrow pointing downward represents the branch control input of the DSP function, wherein an indication of the arrow pointing to the left is the input of the DSP function, and the arrow pointing to the right is the output of the DSP function.

15. (New) The method of claim 10 wherein adjusting the value of a parameter includes using a MIDI controller.

16. (New) The method of claim 10 additionally comprising storing the playback setting in a directory with the sound source.

17. (New) The method of claim 16 additionally comprising loading the playback setting from the directory.

18. (New) The method of claim 10 additionally comprising transposing the sound source across a note within a selected keyrange.

19. (New) The method of claim 10 wherein the DSP layer includes start points, end points, loop start point, and loop end points for playback of a source file.

20. (New) The method of claim 10 wherein the DSP algorithm includes DSP functions for a signal flow, each DSP function including DSP settings creating motion paths.

21. (New) The method of claim 10 wherein providing a work space includes selecting parameters from a list of parameters for creating the playback setting, the list of parameters including volume, pan along an X-axis, pan along a Y-axis, and pan along a Z-axis, wherein the work space includes a channels portion and a sequence channels portion.

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22. (New) The method of claim 10 wherein creating a curve includes providing points on the curve of the motion path when a cursor is clicked on the curve;

adjusting the curve of the motion path by dragging one of the points on the curve;

activating one of the DSP functions to activate processing of the sound source or deactivating the one DSP function to bypass processing of the sound source;

providing an indicator of the DSP function, the indicator comprising an arrow, wherein an indication of the arrow pointing downward represents the branch control input of the DSP function, wherein an indication of the arrow pointing to the left is the input of the DSP function, and the arrow pointing to the right is the output of the DSP function;

adjusting the value of a parameter includes using a MIDI controller;

storing the playback setting in a directory with the sound source;

loading the playback setting from the directory;

transposing the sound source across a note within a selected keyrange;

wherein the DSP layer includes start points, end points, loop start point, and loop end points for playback of a source file;

wherein the DSP algorithm includes DSP functions for a signal flow, each DSP function including DSP settings creating motion paths; and

wherein providing a work space includes selecting parameters from a list of parameters for creating the playback setting, the list of parameters including volume, pan along an X-axis, pan along a Y-axis, and pan along a Z-axis, wherein the work space includes a channels portion and a sequence channels portion.